ABSTRACT OF DISCLOSURE

A QoS controller, in an IP network having one or more routers, is disclosed. The controller includes a storing unit configured to assign a first bit area and a second bit area within a field in an IP header of an IP packet. The storing unit stores first bits for controlling the routers into the first bit area and second bits for routing at the routers into the second bit area. A reporting unit is configured to report to the routers the first bits and the second bits stored by the storing unit.